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## ORIGINAL COMMUNICATIONS.

### FUGITIVE THOUGHTS ON DIPHTHERIA, ITS TREATMENT, CASES, ETC.

BY JAMES L. TYSON, M.D.

MUCH has been said and written on this subject, and but little reliance is placed on the general treatment promulgated from time to time, while the prevalence of the disease in various sections of the country, and its alarming mortality in some, have caused many to almost shrink from encountering it. The modes of treatment have been as various as the colors of the kaleidoscope, though not of equal symmetry and beauty; for while one physician will keep his little patient pleasantly fuddled on brandy (alcoholism), another will flood the infant system with that *harmless* article, quinine, till it has reached the point *playfully* denominated *cinchonism;* and still another, with equal *pleasantry*, will rapidly "throw in" that other *harmless* drug, the *mild* chloride of mercury, and the little tortured sufferer is well when he happily voids "polyps."

Though from these varied "experiences" we may glean some hints, practically they would seem better adapted to certain malarious sections in our Western country than to this locality; for while some here have pronounced them to be decidedly a new order of treatment, verging on the *heroic*, others have been content, with more euphemistic phrase, to say *sublime.* The quinine treatment, under certain conditions or in peculiar phases of the disease, may become not only advantageous but a necessity. There are doubtless cases that recover "in spite of the treatment," as there are others which will not recover whatever it be.

Some years since, I was called in consultation to a girl twelve or thirteen years old, dying, as her father said, from diphtheria. Three children of the family, I was informed, had died a few days before of the same disease. I found the case a sad one indeed. The whole pharynx, including the anterior and posterior half-arches, tonsil glands, velum palati, uvula, and back to the posterior nares, the Schneiderian membrane being involved in its whole extent to the nasal orifices, where it could be seen, was coated with a thick, tough, yellowish membrane. The larynx was, of course, implicated, there being complete aphonia, even to whisper. She was in a lamentable condition, very prostrate, and unable to take any nourishment save the blandest liquids, a teaspoonful of milk occasionally, and by her manner denoting a horrible sense of impending suffocation. As something must be done to afford relief at once, I suggested, and applied by the request of the family physician, a strong solution of nitrate of silver,—℥ij to ℥j,—with a curved probang, to every part that could be reached throughout the pharynx. It was rapidly done; but while making the application I observed the membrane curl at its edges after being touched by the nitrate. To these I applied a pair of curved dressing-forceps, and eventually detached nearly the whole mass, as one would peel an orange. It afforded her great relief. Without going further into the case or detailing the subsequent treatment, it may suffice to state that she ultimately recovered; but a year elapsed before her health was at all established. She is now the mother of three children. One object in stating this case is to manifest under what desperate circumstances recovery may occur in this disease, and to illustrate by it, and another I shall refer to, the allegation that the disease is a systemic and not altogether a local affection, though securing a lodgment first on those parts—the throat and its appendages—where germs are most likely to be early established. Whilst in attendance on this girl I observed another, about four years old, looking languid and anæmic, seated on its mother's lap. No reference was made to her till I had asked the question if she were in good health. The mother replied that she had always been, till within *the last two or three days* she seemed to have lost appetite and was weak and pale, but complained of nothing in particular. Suspecting diphtheria, I at once examined her throat, along with the attending physician, but could detect no deposit, only a slight increase of vascularity, which gave her no uneasiness, nor was there the least enlargement of the glands, either internally or externally. The heart's and respiratory murmur, though feeble, were normal. We ordered her chlorinated iron, a stimulant

tonic, beef-tea, etc. On the following day the child died, very calmly, from asthenia the result of systemic poisoning. The two cases, though not typical of all, are sufficiently so to exhibit the dissimilarity, to put no finer point upon it, between the affection in question and membranous croup,—with which some have chosen to confound it,—to satisfy the doubts of the most casual observer. In croup, death is caused by asphyxia or stasis in the radicles of the pulmonary veins; in diphtheria, by asthenia,—systemic poisoning,—unless the larynx be involved, when stasis in the pulmonary capillaries hastens the end. There are so many points of difference in almost every phase of the two maladies, often treated of, and known to most, that it would be superfluous to rehearse them here. I am unable for a moment to entertain the idea of there being any more definite analogy between them than that the same parts are not unfrequently implicated, the one by an exudation, the other by a deposition; but that they constitute one and the same disease, pure and simple, I utterly reject.

One object in penning these lines was to refer to a treatment for diphtheria, not new certainly, for there has already appeared a synopsis of it in the *Times*, but the best, decidedly,—with occasional slight modifications to suit cases,—that has been presented to the medical world. It is the frequently repeated small dose of tinct. ferri chloridi, and sol. potassii chloratis, alternately every half-hour, following each for two or three minutes with a spray from a hand-atomizer, of liq. calcis and carbolic acid. (As the formulæ have been given in the *Times*, it is hardly necessary to repeat them here, but I will append them to this paper, and you can use them at your discretion.) These remedies have been long employed, but never before in the manner or frequency advocated by Dr. C. E. Billington. He has reported great success in the treatment of this often tractable malady, and speaks of it in that modest, straightforward manner which carries conviction and compels assent to his earnest words.

During the past three months I have had occasion to test its value in thirteen cases of diphtheria, six of which occurred in one house, two in a second, and five in a third, and with the most gratifying results, for all recovered, though some of them were of a very serious type. Among the six children, ranging from thirteen to two years old, equally divided as to sex, a little boy was first attacked. The mother, suspecting nothing serious, employed some domestic remedies, which gave no relief, for in about twenty-four hours the throat affection became intolerable and the child grew so weak as to be scarcely able to stand. I was then sent for, and on examining the throat found the unmistakable deposit on the tonsil glands and uvula, spreading to various parts of the pharynx, the mucous membrane which the deposit had not reached presenting a highly inflamed, glazed appearance. I immediately began the treatment as indicated above, and in about eight days his throat was entirely cleared, and he was well. But, in the mean time, one and another and another child became affected, till all had imbibed it and were subjected to the same process. One little fellow of two years, who had suffered the previous spring for nearly two months from a severe attack of lobular pneumonia, I feared it would go hard with, but he most surprisingly got through without any serious complication. Where the patient is early seen, there is every probability that the malady may be arrested; but if there be delay in the treatment, the result is often extremely doubtful.

In the other family of five, a little boy five years old was taken with what appeared to be tonsillitis or mumps,—for I did not see him during the first three days,—and rapidly grew worse. I was summoned to him in great alarm, he being an only son. I found the pharynx, tonsil glands, and uvula very thoroughly pasted. The little fellow could scarcely speak in a whisper, and answered questions by a nod or shake of the head, and, being ordinarily a great talker, the inference was that the glottis and upper larynx participated in the disease, and he either could not speak or the effort to do so was painful. In ten days he was well, an improvement being observed in the first few days. About a week thereafter, his sister, nine years old, was taken with the disease, having large patches of deposit on both sides of the pharynx, with accompanying prostration, and on the third day of her sickness the mother took it and was seriously ill, and in three days more the nursing infant of three months old.

I treated all of these alike, but in addi-

tion to the spray had boiling lime placed in a suitable vessel on a small kerosene-stove, and thus a continuous vapor was diffused through the apartment. This was important for the baby particularly, as the hand-atomizer could not be used for one so young. I had serious doubt of her feeble little life surviving the inroad of so grave a malady. Her color and appearance resembled putty, and her pitiable moan—for she was unable to cry—was very distressing. She refused to nurse, and rejected the bottle, to which she had been accustomed,—for what lady, in this enlightened nineteenth century, does not bring up her baby mostly or largely by hand? For three days the poor child was only fed on a teaspoonful of milk and a few drops of brandy occasionally. I had three beds in the same room at one time, and the office of the nurse was no sinecure. The mother, daughter, and baby were treated alike, the latter receiving her medicine with the others—only one-third the amount—every half-hour, omitting the spray. In twelve days, dating from the time the first of the three disclosed any symptoms, they were all well. The length of time would not have been so great, but both mother and daughter relinquished their medicines too soon, when renewed diphtheritic patches, with accompanying prostration, demanded their resumption. It is always most prudent to continue the medication, somewhat prolonging the time between each dose, and the spraying, for two or three days after apparent recovery. Lastly, the husband and father took the disease, and it handled him more severely than any of the others, except the baby. There was considerable change in the voice and hoarseness for the first three days, the diphtheritic deposit extending back to the posterior nares, on the Schneiderian membrane, and deep into the œsophagus. The constitutional symptoms, too, were more marked, utter prostration, and lancinating pains, darting from the throat to the eye and ear of the affected side, were very distressing. One side of the pharynx and œsophagus appeared to be the most involved, and was coated with a thick, leathery deposit, while the corresponding tonsil, parotid, cervical, and submaxillary glands were intensely swollen, painful, and sensitive. He could take nothing but fluids,—beef-tea, milk, and egg-nog: the difficulty in swallowing even semi-fluids, such as oatmeal-gruel, was extreme, on account of the excessive pain to which it gave rise. Touching the parts about half an inch below the angle of the jaw, where the pain and soreness were most severe, with a long, curved camel's-hair pencil armed with a strong solution of chloral in glycerin,* afforded great temporary relief; and, when the almost intolerable agony and tenderness along the glands of the neck were greatest, bathing the parts very gently with a strong solution of camphor in sulphuric ether was for a time a source of much comfort. The half-hour doses and spraying, along with vapor of lime in the room, as in the other cases, were never intermitted. At the end of ten days the diphtheritic character of the disease was entirely removed, but the throat presented a highly inflamed, swollen appearance, and I greatly dreaded implication of the larynx,—which fatal combination, a few days previously, was said to have destroyed the Princess Alice of Hesse-Darmstadt. My patient, indeed, was in a very critical condition, the blandest fluids being taken with the greatest pain and difficulty. He complained at this time of pains in the limbs and chilliness, followed by flushings, similar to what he had experienced when suffering from fever on the Mississippi River, and subsequently on the Isthmus of Darien, where he was detained after leaving the fleet in the Pacific. At that time he was a young and gallant officer of the navy, having participated in all the conflicts of Farragut on the "Hartford" during the war. It was a satisfaction to be instrumental in aiding to preserve the life of such a man.

Suspecting that his present condition, with an aggravation of the old and a development of new symptoms, was due to the malarious taint of which he had so long been an occasional victim, and still administering the chlorate of potassium and iron, but at longer intervals and in diminished quantity, and a spray of half a grain to the ounce of chloral hydrate and lime-water, I gave him antiperiodic doses of quinia three or four times a day. The changed spray he especially lauded as very grateful, being soothing and cooling to the inflamed and sensitive parts, on which ice exerted no influence whatever. Thus em-

* Dr. Cesare Ciattaglia, an Italian physician of Rome, claims to have obtained great success in eight cases of diphtheria by applying to the throat, three or four times a day, a solution of ʒi chloral hydrate in ʒv glycerin, along with the internal administration of ʒiiss to ʒiv chlorate of potassium dissolved in water, throughout the twenty-four hours, for children, and ʒi for adults.

ployed, chloral is the best antiseptic extant. In twenty-four hours he was better, and in forty-eight hours much improved, having no return of the aching and chilliness, while the throat presented a healthier aspect and the pain was very materially diminished. In a few days thereafter he was well and relinquished all medication.

One can only be a propounder of the etiology of this disease. Its infection or contagion is not admitted by some. The idea of its conveyance by fomites I reject. Of its infection to a certain extent there can be no doubt, as when an individual takes the breath of one laboring under it. How else shall we explain the fact of an entire family, in close intercourse, becoming subject to it one after the other, or of a physician taking it from his patient? A kiss on the lips of her child is said to have conveyed it to the Princess Alice. That it is not infectious or contagious, in the generally received axiomatic signification of these terms, is apparent. Two children of the latter household whose cases I have detailed, though excluded from the room of the sick, and kept in another part, daily passed the door a dozen times, and were in almost constant intercourse and slept with two waiting-maids who each day passed through the room frequently, yet neither of the four contracted the disease. What gives rise to it? Noxious effluvia, impure gases from decaying vegetable matter, miasm and malaria from "bogs, fens, flats," etc.? But these are the alleged origin of other diseases, such as typhoid fever, etc. But why should it be diphtheria and not typhoid fever? In all the cases of diphtheria or typhoid fever which have come under my observation, and they have been numerous, there were outside contiguous causes or inside influences adequate to justify the dogma that the germs of disease are developed, not originated, in the putrescence of decaying vegetable matter. In the three families referred to, but especially in that of the latter, the cause was patent to all. The authorities had opened a road alongside the yard, encroaching several feet on their residence; but, instead of taking the precaution to grade it to a declivity near by, an excavation was made just at the point where the garbage and sewage from the kitchen passed off through a drain, and here it collected, exposed to the heat of the summer and fall months, causing an offensive atmosphere and nuisance in the vicinity, and just by where the little fellow who was first attacked was accustomed to play. Though repeatedly notified and urged to remedy their defective drainage, it was criminally neglected till after disease had invaded the mansion and jeopardized the lives of its principal inmates.

Faith in the germ theory, or the doctrine which concedes to every zymotic disease a special germ from without, which originates it, would seem to be the only philosophical and rational conclusion, as it affords the one plausible elucidation to this otherwise occult and mysterious problem regarding their etiology. The question may recur, To what arcana of nature do these germs owe their origin? Do they not, as entities, float in the atmosphere and circulate in the air we breathe, oftentimes of such extreme tenuity as to be scarcely appreciable by the aid of a powerful microscope? They are *le poison subtil* pervading all space, only developed into active vitality and deleterious properties under certain favorable circumstances, when, inconceivably multiplied and widely disseminated over the land, they are truly "the pestilence that walketh in darkness," soon to become "the destruction that wasteth at noonday."

I append Dr. Billington's formulæ:

℞ Tinct. ferri chloridi, f℥j–f℥iss;
Glycerinæ,
Aquæ, āā f℥j.—M.

℞ Potassii chloratis, ℥ss–℥j;
Glycerinæ, f℥ss;
Liquoris calcis, f℥iiss.—M.

℞ Acidi carbolici, ♏xv;
Liquoris calcis, f℥vi.—M.

For spray.

## TWO CASES OF ANÆSTHESIA WITH SOME METALLOSCOPIC EXPERIMENTS.

BY JOHN GUITÉRAS, M.D.,

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I HAVE had an opportunity of testing the so-called metalloscopic phenomena in two cases of anæsthesia. The results have been no less bewildering than is the literature of the subject.

The *Times* for November 23, 1878, contributes with a leader to the history of metalloscopy. I venture to add some facts

and references. In the first place, it must be distinctly understood that the experiments of Bennet with pieces of wood have failed at the hands of those who, like Burg and Charcot, believe that there are peculiar susceptibilities to one or more of the metals; that in testing the effects of these they have been found generally the same, though the patient was not aware of the nature of the object used. (See discussion in the Clinical Society of London, reported in the *Lancet* for November 3, 1877; also "La Métallo-thérapie dans le Service de M. Verneuil," by Dr. Burg, in *Gaz. Méd. de Paris*, September 1, 1877. The *Lancet* for November 17, 1877, contains a letter from Dr. Althaus on the subject.)

It should also be remembered that if in cutaneous anæsthesia the patient may know what to expect from these experiments, this is certainly not the case with the disorder of vision called achromatopsy. Here the patient has lost perception of one or more colors. If one color alone is lost, it is the violet; if two, the green is added; and in regular succession the others may follow, viz., red, orange, yellow, and blue. Now, suppose that the three first were lost; if the metallic plates are applied to the forehead, the perceptibility of the colors will return in the regular order,—red, green, and violet,—to disappear afterwards inversely. (See Report of Biol. Soc. of Paris, in *Gaz. Méd. de Paris* for February 16, 1878; also the interesting experiments of P. Regnard in same journal of February 23; also the application of these observations to the treatment of some cases of asthenopia, by Abadie, reported in the *Lancet* for July 20, 1878, p. 95.)

In the Report of Biol. Soc. of Paris, *Gaz. Méd. de Paris*, November 10, 1877, Romain Vigoureux defends very ably the electrical theory. He finds the results to be considerably modified by the superposition of different metals upon the one originally active. He likens the phenomenon to that taking place in a voltaic pair.

Finally, the same author, in the same journal, May 4, 1878, "De l'action du magnétisme et de l'électricité statique sur l'hémianesthésie hystérique," reports the results of successful experiments with these two agents. In using the magnets, *contact* with the skin was always avoided. The effects were even more marked than with metallic plates. The poles of the magnets were found to be the active parts; not so the neutral lines. Also in Report of Biol. Soc., *Gaz. Méd.*, June 1, 1878, he states to have obtained successful results from the application of magnets in a case of organic hemi-anæsthesia.

*Case I. Organic hemianæsthesia. Failure of metalloscopic experiments.*—Elizabeth A., æt. 49, admitted January 4, 1878. Intemperate, syphilitic, consumptive. Four or five years ago had cephalalgia and "lumps in the head." She was treated in the surgical wards, at that time, for "syphilitic caries of the frontal bone." There was probably some meningitis of the base, or disease of the temporal bone, for she had then loss of hearing of the left side, and paralysis of the facial, with ulceration of the cornea. A year later she woke up one morning and found the whole left side to be paralyzed.

Present condition. There is a deep depression in the frontal bone, at the margin of the hair, one inch to the right of median lines. She has slight motor paralysis of left extremities, with some impairment of electro-muscular contractility. The leg is the seat of occasional painful spasms. There is complete paralysis of the left facial nerve. This region shows wasting, and does not respond to any electrical stimulus. There is absolute cutaneous anæsthesia and analgesia of the left side of the body. She has probably two distinct lesions, one peripheral, involving the fifth, seventh, and eighth pairs, and one central, affecting more particularly the posterior part of the internal capsule.

On three different occasions I tried the effect of the metallic plates. I applied four five-dollar gold pieces, and held them with moderate pressure for fifteen minutes. A gold watch, and silver and copper coins, were also tried. There was no response whatever. Her pulmonary symptoms improved very rapidly under the use of large doses of iodide of potassium, and she asked for her discharge before I had an opportunity of inquiring more carefully into her nervous symptoms.

*Case II. Hystero-epilepsy. Irregular anæsthesia.*—Cora S., æt. 34, admitted to the Philadelphia Hospital, February 2, 1878. There is no hereditary predisposition to nervous diseases. She menstruated at the age of sixteen, and was a perfectly healthy girl when she entered the army, to follow her lover, in 1862. She served as a drummer-boy until the end of the war. Whilst in the service she did not menstruate. Soon after her discharge she became pregnant, and aborted. One or two months later she became very "nervous," "took to shaking," had the "blind staggers," and was in the habit of laughing and crying inordinately. She has had "fits" these last eight years, once, twice, and three times a month.

She came under my care in August, 1878. Haggard, emaciated, pale; though quite fre-

quently the face is inordinately flushed. Some days she is quite active, at others she seems just able to drag herself along. She menstruates regularly, but the discharge is very pale. The bowels are costive, the appetite irregular, and the urine abundant.

The "fit" starts with a distinct aura from the pelvic cavity. It gives her plenty of time to prepare for the attack. There is also a feeling of malaise for hours before the seizure. During this time she eagerly asks for bromide of potassium, which if taken in time, she says, is sure to avert the fit. The aura she describes as "something heavy rolling" in the pelvis; then she feels "the blood rushing" from that region, a frightful oppression about the præcordia, a sensation of choking, a rush of blood to the head "like the humming of bees," and then she loses consciousness and the convulsion commences. I have only once seen her in a fit, but I am told that the phenomena are always the same. She turns partially on her left side. The face is purple; the eyes are turned to the left; the mouth is open, and the tongue is seen to be violently twisted, the tip being raised and thrust to the left. The only clonic spasm about the face is produced by the interrupted contractions of the left platysma, horribly dragging down the left corner of the mouth. The body and limbs are rigid. The arms, stretched forward, are the seat of rather slow oscillations. The left arm is somewhat caught under the body. The fingers are spread out inordinately. The left leg is fixed in violent extension, and the right, extended at the knee and ankle and partially flexed at the hip, oscillates with the rest of the body. She froths at the mouth, but does not bite her tongue. The paroxysm may last over a minute, the convulsions gradually lessening. Another paroxysm may follow immediately, before she returns to consciousness. She generally has five or six in succession, or they may extend over twenty-four hours, with intervals of consciousness. Deep coma is apt to follow each seizure.

Twice has the temperature been taken after the paroxysms. Once it was 99½° Fahrenheit immediately afterwards, next morning it was 98°, but an hour later she had a chill, and the temperature rose to 100⅛°, and remained above 99° until the next morning, when it fell to normal. On one other occasion it was found not to ascend over 99½°.

She has tenderness over both ovaries, especially the left. Steady pressure on the latter made her wince, and cry out, "It will give me the fit." The paroxysm witnessed by myself was instantly arrested by firm pressure on the ovary. The same procedure has succeeded once again, but has failed at other hands.

The anæsthesia is usually irregularly distributed over the body. Sometimes it is general, including the senses of taste and smell. Rarely is it absent, and then she is very bright and active. There is loss of the sense of temperature. The anæsthetic limb feels numb, and I generally find by the dynamometer that it is three or four degrees weaker than the opposite one, if the latter is not affected. The extremities are always cold. I have never found the flexor surfaces of the elbow-joint anæsthetic, and the popliteal spaces very seldom. There is absolute analgesia. Needles may be introduced into the flesh, and pushed from *within outward*, without eliciting any pain. Sometimes she complains one or two minutes after the puncture. The areas not anæsthetic are hyperæsthetic. There is also ischæmia of the affected surfaces.

The irregular distribution of the anæsthesia may be illustrated by the following note, taken September 20, 1878. There is hyperæsthesia of flexor surfaces of elbows, of the palm of the right hand, the region of right trapezius down to the level of the spine of scapula, and an area between the right cheek and ramus of the jaw. The cheeks, though red (passive), are anæsthetic together with the rest of the body. The lines of demarcation of these areas are very sharp. Her attention may be called elsewhere, and yet she will jump, by a reflex act in fact, as soon as I transgress upon the healthy skin.

I have been led to give in detail a history of this case because it is a typical example of hystero-epilepsy or epileptiform hysteria. For further information I would refer the reader to Charcot's Lectures on Diseases of the Nervous System. I may state, however, that the character of the convulsions, the hysterical manifestations, the ovarian phenomena, the anæsthesia, the absence of any marked elevation of the temperature after the convulsions, the age at which the fits first appeared, without any evidences of syphilitic or other organic cerebral disease, are features sufficient to exclude the diagnosis of epilepsy and to class this disease in the group of hysterical affections.

Up to December 13 repeated metalloscopic experiments were tried, after the fashion described in the previous case, without results. Sufficient "expectant attention" was bestowed by the patient, myself, and others upon the anæsthetic surfaces to awaken the most dormant sensibility, were it in the power of such fixation of attention so to do. The patient herself tried some little experiments. She informed me once that she had succeeded in making the punctures bleed by the application of a hot cent,—copper being the

limit of her metallic armamentarium. I found that for this purpose the coin had to be heated to a degree unbearable by any healthy skin.

On the above date, the left arm being hyperæsthetic and the right anæsthetic, I wrapped a lead strap four turns around the right forearm. In two minutes and a half the transfer phenomenon was fully developed. The right arm, from the insertion of the deltoids to the fingers' ends, had become hyperæsthetic. The patient complained of "a rush of blood" in the right shoulder, and a feeling of warmth under the strap. A shorter strap was then placed about the left forearm, but no change took place until the one on the right side was removed, when in less than two minutes the left arm became sensitive. During the experiment none of the punctures bled. Perhaps they were very superficial. Both legs being anæsthetic, the straps were simultaneously applied to them, with successful results.

Since then the coins have been tried in vain; but a metallic tape measure (steel?), an ordinary bandage, and finally encircling the limb with my hands, have produced effects similar to those of the lead straps.

To test the effect of expectant attention, I tried the following experiment. The patient in bed, I threw up the covers, arranging them so that she could not see her legs, but at the same time concealing this purpose. The left leg was anæsthetic, the right was not. The heel was kept slightly elevated from the bed, as had been done in previous experiments. I wrapped the lead tightly around the limb, but removing one turn as I applied the next, and finally leaving the limb bare. During the operation I asked her if I was pressing too hard. She did not feel it. The limb was held up for fifteen minutes, and meanwhile I asked her several times whether the strap was not too tight. She did not feel it. This was her usual answer when the strap was applied, so that the delusion was complete. No change whatever occurred in the distribution of the anæsthesia.

My experiments with the color vision have failed, on account of the varying and careless answers of the patient.

It is not very easy to make deductions from these experiments; yet the impression is strong in my mind to the effect that cerebral action is capable of overcoming the inhibitory forces which are at work upon the perceptive centres in these cases. In fact, when I repeated subsequently the experiment last mentioned, the first touch of the pin was felt, but that was all: else how explain the fact that the garter around the limb, the shoe, the pressure of the bed, have not the same effect as the bandage applied by the experimenter?

The centripetal channels are undoubtedly more diffuse than the centrifugal, and it is very probable that the powerful influences which may overcome an interruption to centrifugal nerve-forces (motor paralysis) are not needed for the overcoming of obstacles to the centripetal, or for the neutralization of inhibitory influences. But in the majority of these cases the influence of the will does not seem to be sufficient. It must be aided by some stimulation of the peripheral ends of the nerves. This is brought about by the different applications to the skin. The experiments of others show that undoubtedly the electric currents produced by the application of certain metals are most apt to do this. In fact, it seems that they may do so without the intervention of any central stimulus. The increased functional activity of the perceptive centres, brought about by cerebral action and by the stimulation of the peripheral nerves, will do for this diseased nervous apparatus what emotions will do in a perfectly healthy individual. They will develop, for instance, a motor power not present under ordinary circumstances; or, to make the simile more like, it is something akin to the abnormal sensations, the pain, that may be started in any part of the body by fixation of attention. In hysteria there is an arrest of cerebral action, says Dr. Wilks. In this line of thought is probably to be found the explanation of these phenomena. Very profitable reading will be found in an article by Dr. Wilks on cerebritis, hysteria, and bulbar paralysis, as illustrative of arrest of function of the cerebro-spinal axis, in Guy's Hospital Reports, vol. xii., 1878.

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## VEGETATIONS OF THE ENDOMETRIUM.

BY J. E. GARRETSON, M.D.

SUGGESTED by Prof. Goodell's able and very interesting paper published in your journal of the 18th of January, I beg to offer a paragraph presenting the claims

of what is commonly known as "London paste" to substitute both the sharp and dull curette in a class of operations referred to by the distinguished gynæcologist.

The cutting off of uterine vegetations by an act of mechanical excision is a process which can have found in it the minimum only of alterative effect; it may have found in it the maximum truly of hemorrhagic accident. Endometric vegetations, to be gotten rid of permanently, demand basial obliteration. It is not enough, so to speak, to cut away branchlets and branches, leaving rootlets and roots. The exigencies of such cases point to a therapeutic grubbing-hoe.

Having for many years employed with satisfactory success, in a variety of directions, the combination widely familiar under the name of "London paste," and having observed that the employment of this paste is never attended by what is ordinarily understood as inflammation, I was led to have recourse to it as a destructive of the benign vegetations of the uterus. The result in most cases in which I have so used it has been profitable to the patients to an extent that leads me to direct attention to the agent with a large share of confidence.

London paste, introduced to the notice of the profession by Dr. Morell Mackenzie, of England, consists of equal parts of caustic soda and quicklime made into a semi-fluid by admixture with absolute alcohol. In ordering the ingredients for this paste from the druggist, the soda and lime are to be mixed, great care being taken, in stopping the bottle in which the powder is placed, to prevent the possibility of deliquescence, the material in a moist state being worthless. The paste is always to be made at the moment of use.

To employ "London paste" for the destruction of vegetations of the endometrium, demands the preliminary step of enlarging the os and neck through the use of sponge tents. A plan commonly found satisfactory is to introduce a tent of large size the day before the proposed operation, the sponge being retained *in situ* by a plug of absorbing cotton; the patient remaining, of course, in bed.

To apply the paste,—the inside of the uterus being fully exposed,—the cauterant is carried to the spot to be acted on by means of a spoon-cupped director; or, if the surface at large be studded, it answers every purpose to twist about the neck and bulb of the Simpson sound a tuft of absorbing cotton, and, after saturating this with the paste, smear the parts generally. The application may be repeated, if found necessary, once, twice, or even thrice in a week.

While peculiarly curative of benign vegetations, "London paste" is the worst possible application to granulations of cancerous character: accuracy in diagnosis is all-important in employment of the means.

As might be inferred, the use of "London paste" in the uterus is attended with a discharge, which continues for a number of days; it may be so many as twenty or thirty. The result, however, is commonly a solid and permanent contraction of the viscus, together with restoration of office.

An assuring familiarity with the action of "London paste" is gained by using it on the common seed-wart. An application made to such a wart is found to act with a rapidity which allows the body to be scraped away in one or two minutes.

Somewhat analogous to the puzzling cases of uterine vegetations instanced by Prof. Goodell are the epulic fungi met with occasionally in the mouths of pregnant women. I have seen a growth of this kind rise from the gingival margin and half fill the mouth with its proliferations before the end of a term; yet, utero-gestation accomplished, the condition has disappeared, leaving no sign. In these cases the affected gum, like the "cervix uteri," is "large and flabby," bleeding is easily provoked, and constant oversight on the part of the surgeon is necessary to the comfort, if not indeed to the safety, of the patient.

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## THE ACTION OF BRUCIA ON THE MOTOR NERVES.

BY ROBERT P. ROBINS, B.A.

IN the October number of the *Journal of Nervous and Mental Disease*, Dr. Wm. H. Klapp, of this city, advances the theory that strychnia, given even in toxic doses, fails to affect the motor nerves.* This theory, which is in opposition to the views of other experimenters with this drug, is substantiated by Dr. Klapp in

* On the Anatomical and Physiological Effects of Strychnia on the Brain, Spinal Cord, and Nerves. By W. H. Klapp, M.D., Philadelphia.

a series of thirty-seven experiments on dogs, cats, frogs, etc., he in every case failing to find that the drug destroyed neurility. To account for this difference in the results obtained by Dr. Klapp from those previously reported, it is suggested that probably in the latter cases the strychnia solutions used were tainted with *brucia*, the fellow-alkaloid. Dr. Klapp's solution of strychnia, prepared by Messrs. Powers & Weightman, was submitted to the usual tests, and was found to be absolutely pure, and thus the possibility of mistake was reduced to a minimum.

Acting on the suggestion of Dr. Klapp, I instituted a series of fifteen experiments with brucia, and have obtained results highly satisfactory in the corroboration of the theory which he there advanced. These experiments with brucia were performed as nearly as possible under the same auspices as were those with strychnia: the solutions were of the same strength, the same apparatus was used, and the same parts were chosen for experimentation. The following is a detailed account of the investigations.

The animals used in the experimentation were ten frogs, three rabbits, and two dogs. The solution was prepared as follows. In each cubic centimetre of distilled water there was dissolved one-hundredth of a gramme of brucia, and the solution was neutralized with a drop of acetic acid. The Grove cell, 80 millimetres high and 50 millimetres in diameter, and the Dubois-Reymond induction apparatus (with Helmholtz's modifications), as used by Dr. Klapp, were employed for the purpose of irritating the nerves. The following detailed accounts of a few of the experiments will serve to show the action of the drug; the other experiments verify the results as stated below.

*Exp. II.*—Frog; weight, 23 grammes. At 1.30 P.M. 1 cubic centimetre of the solution was injected under the skin of the lower jaw. At 1.31.5, general tetanic convulsion; at 1.32.5, emprosthotonos; and at 1.40.2, dead. At 2.10.1 the left sciatic nerve was irritated, but gave no response with the highest power of the battery.

*Exp. III.*—Frog; weight, 26 grammes. At 2.18 P.M., ½ cubic centimetre of the solution was injected into the lungs; at 2.20, general tetanic convulsions, prolonged until 2.25; at 2.25.50, dead. At 2.30, right sciatic was irritated with full coil strength, but gave no response. Right and left sciatics were tested alternately, at intervals of five minutes, until 3.10, without eliciting any response.

*Exp. VII.*—Rabbit; weight, 3 pounds. At 1.20, ½ cubic centimetre of the brucia solution was injected. At 1.26.5, strong tetanic convulsions, with great dilatation of the pupil; at 1.29.6, cessation of convulsions, which occurred again at 1.30.16, induced by touching, and lasted until 1.31.3, when the tetanus relaxed and the animal was found to be dead. At 1.40 the left and right sciatic nerves were bared and tested with battery at O, alternately, until 2.10, without response, while muscular response was elicited at each application.

*Exp. X.*—Dog; weight, 28 pounds. At 2.14, ¾ cubic centimetre of the solution injected. At 2.16.30, uneasiness, whining, pupils much dilated; at 2.19, strong convulsions, great injection of the conjunctivæ; at 2.21, cessation of convulsions, stiffening of body, slight twitching of facial muscles, voiding of urine and fæces, marked and continued nystagmus; at 2.28.30, cessation of the convulsions, twitching of the facial muscles, and peculiar snapping of jaws; at 2.55, cessation of respiration, and at 2.56, cessation of heart's action; 3.10.5, battery at O applied to gluteal muscles gives satisfactory response, but none obtained from right or left sciatic; and at 3.14 and 3.18 reapplied with same results. (Post-mortem examination showed great congestion of the brain, heart stopped in diastole, with both ventricles full of liquid blood.)

*Exp. XV.*—Rabbit; weight, 2¼ pounds. At 10.54, ¾ cubic centimetre of the solution was injected. At 10.55, uneasiness and convulsive facial movements; at 10.56, tetanic convulsions of great violence, followed by death at 10.59. At 11.06, 11.10, and 11.15, the battery was applied to right and left sciatic nerves and gluteal muscles, with responses from the latter, but none from the former.

These experiments cited *in extenso*, together with the others, which gave the same relative results, seem to corroborate Dr. Klapp's theory on the subject, and would appear to afford an explanation as to why the experiments which he quotes in his paper should differ from those of other investigators with strychnia.

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## A CASE OF MASTOID DISEASE.

BY CHAS. P. KNAPP, M.D.,
Wyoming, Pa.

MRS. L., æt. 23, American, wife of a miner, one child, nursing, consulted me on June 18, 1878, on account of severe pain in right ear, with some slight discharge. The patient's appearance was cachectic. The only history, more or less earache since September, 1877.

I washed out the ear with carbolized water; passed speculum easily. The membrana tympani appeared somewhat "flabby," and upon the patient holding her nose and mouth and inflating the middle ear, air bubbled through a small opening in the membrane. Watch could be heard placed over the ear. Ordered blister over mastoid, and bromide of potassium and chloral for pain.

Patient did not call again until July 4, when there was a profuse discharge of greenish-white pus from ear; mastoid swollen, red, and very sensitive; pain intense; hearing abolished on that side. Mastoid disease diagnosticated. Operation recommended.

July 5.—Assisted by Dr. Guthrie, of Wilkesbarre, and Mr. Hutchins, my student, the patient being thoroughly etherized, I cut down upon the mastoid process, beginning the incision about an inch above the external meatus and carrying it to the termination of the process below, avoiding the occipital and posterior auricular arteries by cutting between and parallel to them. The tissues were swollen and "boggy," and fully an inch in thickness over the process. When I struck the bone, a dessertspoonful (fʒij) of pus welled up. Inserting my finger in the cut, I found the bone bare of periosteum, and broke through a shell of bone, from which a teaspoonful of pus escaped, and then with a bone elevator I opened a cavity into which I could insert my little-finger tip. The bone was ulcerated, soft, and easily scraped away with the finger-nail. The wound was kept open, and a poultice applied over it and the ear. Patient recovered well from ether, and was free from pain. The wound and ear syringed daily with carbolized water and poulticed; discharge copious; some pain at night; tonic treatment.

July 25.—Patient walked about three miles in hot sun.

July 26.—Mastoid swelling returned; discharge ceased; intense pain; partial paralysis of seventh pair nerves, that side.

July 29.—Enlarged former opening, and removed bone, making a sulcus in the process over an inch long and nearly half an inch wide and deep. Patient recovered well. Same treatment as before.

July 30.—Discharge re-established; pain relieved, also paralysis; patient improving daily.

August 6.—Called at night. Pain intense, and patient somewhat delirious. Introduced speculum; enlarged opening in membrana tympani with tenotomy knife; ordered mustard foot-bath; large poultice over that side of head; gave morphia gr. ¼.

August 7.—Patient much better; reported hemorrhage from ear during night. From this time she constantly improved.

November 27.—Patient called at my office. Wound healed; no discharge from ear, and no further trouble of any kind; to all appearances perfectly well; watch heard eight inches from that ear. Treatment, other than surgical, tinct. ferri chl., ♏xx ter in die; syr. hypophosph. comp., fʒss ter in die; morphia, by the mouth, to control pain; lager beer and good food. The child was weaned early in the case, at my advice. The condition of the patient was such as to give poor hope of a successful termination.

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## ERYSIPELAS COMPLICATING RHUS TOXICODENDRON POISONING.

BY P. G. SKILLERN, M.D.

M. C., æt. 84, native of New England, system extremely hearty and well nourished for one of his years; enjoys full possession of all his faculties. Previous history remarkably clear from disease. Having been summoned in great haste to him on the afternoon of December 20, his upper eyelid was found to be considerably swollen and painful. Upon inquiry, it was found to have commenced suddenly with a prolonged chill but a few hours previously; temperature 101°, pulse 94. Treatment, rest, quinia, and a lotion of lead-water and laudanum.

December 21.—Inflammation extended to lower eyelid; the tissues around the eye were now greatly swollen and very sensitive to the least manipulation, and when viewed from above and compared with the sound side were found to project fully half an inch. He was unable to open his eyes; complained of slight headache, anorexia, and constipation; temperature 100°, pulse 85. Ordered laxative pills and liq. ferri. chlor.; quinia and lotion to be continued.

December 22.—No abatement of symptoms; swelling spreading rapidly all over side of face and down upon neck, accompanied with small vesicles; eyelids discharging an ichorous fluid from two small openings. He was fast becoming debilitated. Recognizing the affection, which was at first obscure, to be one of oak poisoning, a solution of hyposulphate of sodium was at once ordered.

December 23.—Inflammation mostly subsided, and the parts beginning to scale, with the exception of the eye, which was even more swollen, projecting at least an inch, and suppurating profusely.

December 24.—A small erysipelatous patch was now observed on the forehead between the eyebrows, causing him severe headache, burning, stinging pain, and much restlessness. Large doses of iron and quinia were now ordered, with meat-broths and brandy.

December 25.—Erysipelas extending over head; no perturbation of mind; lids still suppurating. Remained in this condition until December 31, when a slight improvement was noticeable, the erysipelatous inflammation beginning to subside, together with the swelling around the eye; an abscess appeared

on the temporal surface of the frontal bone, which was exceedingly painful and annoying.

January 1.—Erysipelas declining. Opened abscess, which afforded much relief.

January 3.—Erysipelas and swelling disappearing rapidly.

January 5.—Erysipelas entirely gone; swelling of lids almost subsided; has comparatively little pain; no headache; pulse strong, regular, and normal; appetite improving; sits up for several hours at a time.

January 7.—Eyelids still continue to discharge. On examination, the tissues were found to have undergone a considerable undermining by the recent inflammation. Knowing the discharge would continue as long as the walls of the abscess remained, stimulating injections and pressure were resorted to. He has since made a good recovery, being able once more to resume his usual vocation.

*Remarks.*—This case is remarkable, first, for the non-existence of any brain-complication, considering the extensiveness of the disease; secondly, for the non-complication of the eyeball with so great an inflammatory action in such proximity; and, lastly, for the wonderful amount of vital force evinced by one of such an advanced age.

## TRANSLATIONS.

THERAPEUTIC USES OF THE BROMIDES.—Rosenthal, in an article (*Wien. Med. Presse*, 1878, No. 46) on therapeutics, speaks thus of the bromides:

*Bromide of potassium*, on account of the adynamia of the heart which it sometimes causes, must frequently be suspended. In addition to weakness, retardation, and irregularity of cardiac action, the bromide of potassium, in large and long-continued doses, may give rise to præcordial pain and mental disturbance. Bromide of potassium, although it occasionally improves the appetite to a marked degree, yet more frequently disturbs digestion when this is not originally strong. In such cases it should be taken at meal-times, or after draughts of milk, which preserves the stomach from irritation. *Bromide of sodium* is a milder preparation, more easily borne by the stomach: it is therefore preferable in the case of nervous women, of old people, and of children, since it has a salty taste, not in itself unwelcome to children. Rosenthal mixes the powdered bromide of sodium to the amount of ½ to 1 gramme (7½ to 15 grains) with breadcrumb, and thus smuggles it in, so to speak, as part of the food. He employs it in various nervous affections, as convulsions, laryngismus, nightmare, and disturbed sleep, giving it once or more daily. The chief objection to the bromide of sodium is its too ready deliquescence. Where enough cannot be given in the form of small pills, it may be given in powders, making up only enough for one or two days, or in solution with syrup.

*Bromide of ammonium* is a more stable preparation. It has a salty ammoniacal taste in solution, which may be disguised by syrup of orange-peel. Rosenthal has given it in doses of 6 to 8 grammes (℥ss to ℥ii) daily, for months at a time, without mishap. It acts well in epilepsy, whooping-cough, spasm of the glottis, and spastic laryngismus (in children as well as in hysterical persons), but no better than the other bromides. *Brominated camphor*, as appears from researches upon animals, affects the heart's action, the respiration, and the temperature, reducing them. Its formula is $C_{10}H_{15}BrO$, and it occurs in white crystals. It is not to be confounded with Laurent's "*bromkampher*," which occurs in red rhombic crystals and the formula of which is $C_{10}H_{16}Br_2O$. It is useful in the milder forms of epilepsy and in alcoholic trembling; but Rosenthal does not consider it equal to the bromides of potassium and sodium. As an antidote to strychnia it has proved valuable given in doses of 1 to 2 grammes (15 to 30 grains) twice or thrice, repeated at short intervals. In nervous palpitation of the heart, Rosenthal has given brominated camphor in the dose of .2 to .3 decigramme (3 to 4½ grains) several times a day in *cachets du pain*. According to Berger, this salt is useful in sexual excitement and pollutions, but it fails in the more stubborn cases, where bromide of potassium, with opium, or tinct. verat. viridis (two or three drops on sugar until slowing of the pulse is attained), acts much more satisfactorily. In the case of a patient ordered small doses of brominated camphor on account of genital excitement, who took on his own responsibility 1 gramme (15 grains) at a dose, Rosenthal observed symptoms of weight and pressure in the head, shortness of breath, slowing of the pulse to sixty beats, weakness of the limbs, and mental disturbance to a marked degree, together

with fear of death. Some ether upon sugar was administered, and later strong coffee, which soon dissipated the alarming symptoms. Rosenthal regards brominated camphor as particularly useful in irritation of the bladder. Both in that form due to taking cold and in that caused by the forcible retention of the urinary secretion, brominated camphor in the dose of .2 to .4 decigramme (3 to 6 grains) thrice daily quickly abated the annoying difficulty in urinating. In such cases it must be continued for some time. Sensitive persons experience fulness of the head (probably due to the action of the bromine); but this feeling leaves after a few doses. Long-continued use of brominated camphor sometimes causes derangement of the stomach, requiring suspension of the remedy. *Bromide of zinc* can be prescribed only in pill form or in solution, on account of its deliquescent properties. It is given at first in the dose of .1 decigramme (1½ grains) several times daily, and is gradually increased to .4 decigramme (6 grains). It is particularly useful in hysterical muscular spasm. Rosenthal does not consider this preparation superior to the bromide of potassium.

*Hydrobromate of quinine* is easily soluble in alcohol, but in water only in the proportion of 1 to 18, even when heated. It dissolves, however, in hot glycerin quite easily (1 to 4), and the solution remains clear for months. This can be diluted with water for hypodermic injection, until a syringeful contains only .1 decigramme (1½ grains) of the quinine salt. Rosenthal has used this with very good effect in a case of hysterical vomiting when opium had failed, the vomiting ceasing entirely after two or three days. Hydrobromate of quinine is also useful in the dose of ½ gramme (7½ grains) a day in general nervousness, in circumscribed headache, and in muscular cramp. Though recommended by Erlenmeyer in the painful paroxysms of locomotor ataxia, Rosenthal has found this preparation not to be depended upon. X.

Excision of the Initial Lesion of Syphilis.—Dr. Th. Kölliker, in a lecture recently published in the *Centralblatt für Chirurgie* (No. 48, 1878), says that if we accept the dualistic view, and regard the initial lesion, so called, as in reality the earliest *secondary* or *constitutional* symptom, it would be useless to attempt to excise this. Within the past few years, also, this experiment has, in fact, been tried by Hüter, P. Vogt, Coulson, Thiry, and others, with almost invariably unfavorable result. The scar, or even the surface of the wound, became indurated, and the symptoms of constitutional syphilis appeared and followed their usual course. For this reason, such authorities as Sigmund, Lewin, and Zeissl regard excision as entirely useless. Auspitz more recently undertook extirpation in thirty-three cases in which swelling of the inguinal glands had already been observed. Of these, setting aside ten cases not long enough under observation, fourteen remained quite free of subsequent syphilis, while in six the disease ran a very mild course. Out of twenty-three, therefore, fourteen were quite cured by excision of the initial lesion. Inspirited by these results, Kölliker followed with eight cases. In these cases the excision was practised on the seventh, ninth, tenth, twice on the fourteenth day, and once each after three and seven weeks from the appearance of the sore. (In one case no note was made of the date of the lesion.) At the time of the excision, glandular enlargement was present in four cases, none of which, however, showed subsequent symptoms of general infection. Five of Kölliker's cases of excision were followed by constitutional symptoms, while three escaped. His conclusions are as follows: 1. In certain cases, which at present cannot be designated with certainty, extirpation of the primary sore serves to prevent general contagion. 2. This may occur even when the glands in the neighborhood are indurated. 3. On the other hand, extirpation is often fruitless, no matter how early undertaken. 4. Even where excision does not prevent the occurrence of general symptoms, it modifies them and makes the course of the disease milder. Kölliker concludes his lecture by subscribing to Auspitz's assertion that the initial indurated sore is not to be taken as a symptom of consummated general infection. X.

The Part played by Baths in Diseases of the Skin.—Dr. A. Carry, whose brochure on baths has recently been reviewed in *Le Progrès Méd.* (No. 47, 1878, p. 903), considers baths under the heads (1) of their action upon the healthy skin and (2) upon the diseased skin. His conclusions are as follows. In the therapeutics of cutaneous disease baths enjoy a factitious

prominence, which causes them to be employed indiscriminately in almost every variety of skin affection. This prominence is partly due to the enterprise of the physicians in charge of various mineral springs. In reality, baths are useful only in a few diseases of the skin, and even in these their action is never, strictly speaking, curative. In affections due to external causes baths serve chiefly to soften and mollify the skin; in animal parasitic diseases they may destroy the parasite; in vegetable parasitic diseases they have little effect. In affections due to internal causes, syphilis, scrofula, etc., baths, by their tonic and stimulant effect, are valuable as an adjuvant to the general treatment. In the dry form of skin disease the bath is useful as a hygienic measure; in the moist forms it is almost always injurious. x.

Some New Preparations of Quinine. —Rosenthal (*Wien. Med. Presse*, 1878, No. 46) says of the *hydriodate of quinine* that he has found it useful in the dose of .1 to .3 decigramme (1½ to 4½ grains) several times a day, in the more recent forms of rheumatism of the face. It has recently been vaunted as a febrifuge, and in the dose of 4 to 8 grammes (℥i–℥ii) is said to reduce even stubborn (?) fever. *Arseniate of quinine* is recommended by Rosenthal in intermittent fever, puerperal fever, and also in chronic skin diseases (the latter a wide range.—Trans.). The appropriate dose is .01 to .02 centigramme (⅙ to ⅓ grain) twice or thrice daily in pill form. In typical facial neuralgia of limited extent, Rosenthal saw rapid relief follow, in two cases, the use of increasing doses of this salt. *Salicylate of quinine*, recently described by Jobst, is a white powder, with a rather bitter taste, easily soluble in ether, but only slightly so in water (1 to 225). In several cases of facial erysipelas and typhoid fever, Rosenthal gave this salt in doses of ½ gramme (7½ grains) and more daily, with the result of materially reducing the fever and quieting the patient. In cases of puerperal fever, and also of the severer forms of necrotic diphtheritis accompanied by typhoid symptoms, the use of salicylate of quinine is to be recommended. x.

Method of Stopping the Pain caused by Cauterizing the Conjunctiva with Sulphate of Copper.—Karl Pich (*Wien. Med. Presse*, No. 48, 1878; from *Cbl. f. Med.*) alludes to the severe and long-continued pain aroused by the employment of sulphate of copper in diseases of the conjunctiva. When this has to be used frequently and for long periods of time, as in conjunctivitis blennorrhoica, the pain is a serious objection. Pich suggests that, after using the smoothly-fashioned crystal of blue-stone, four or five minutes should be suffered to elapse, and then powdered calomel should be insufflated against the spot. The pain, he says, immediately ceases. After having followed this plan for five or six days, the calomel may be employed directly after cauterizing; the pain is at once completely relieved. Whether the calomel acts mechanically or chemically, Pich is unable to say. x.

Bromide of Ethyl in Neuralgia and Sleeplessness. — Winckel and Fiedler (*Wien. Med. Presse*, No. 48, 1878; from *Allg. Med. Cent. Ztg.*) say that this preparation, the properties of which are similar to those of chloride of ethyl, was first used in France in cases of carcinoma with neuralgia and sleeplessness. Dr. Winckel observed good results from its use in the neuralgia of myoma and beginning epithelioma. The hypnotic effect was unmistakable. The dose of bromide of ethyl is 10 to 15 to 20 drops in water before going to bed. It is easily taken. Dr. Fiedler adds that he has used this substance in eight cases of marked insomnia, having given it in the doses just mentioned. Two of the patients who had long suffered from sleeplessness slept well afterwards. The number is, of course, too small, excepting as it seems to invite further trial of the remedy. x.

Acidum Copaivicum. —Géza Lucich, apothecary and professor in Presburg, claims to have isolated copaivic acid and to have made a copaivate of sodium. The acid occurs in prismatic crystals, which soon lose their transparency when exposed to the air. Lucich has also made pills of copaivate of sodium, mixing two parts of the product with one of dextrine and making the mixture into pills with mucilage. Each of these pills contains 2 grammes (30 grains) of the copaivate of sodium, which is equivalent to 6 grammes of copaiba resin. Prof. Wittstein has examined this preparation chemically, and thinks highly of it. Some hints as to its manufacture are given. — *Wien. Med. Presse*, No. 48, 1878; from *Allg. Med. Cent. Zeitung.* x.

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## LEADING ARTICLES.

### THE HOT BATH AS A RESTORATIVE.

THERE is one remedy whose employment in medicine is almost as old as is the human race, but which yet seems to us to have an important use not generally practised. We refer to the hot bath. As sudorifics hot baths are sufficiently in vogue, but their employment as restoratives is not so universally recognized.

The phenomena of death from cold show that a lack of caloric in the body is no less paralyzant of animal functions than is an excess of the same force. Evidently the organism was constructed to run upon a certain plane of heat, and cannot vary from this without serious results. By numerous experiments upon animals, in the laboratory of Prof. Wood, in the University of Pennsylvania, it has been proven that in a cool apartment death rapidly results after section of the spinal cord, from falling of the bodily temperature, the animal which in a warm room will live indefinitely dying very shortly in a temperature of 50° Fahr. The cause of the inability of the animal to resist external cold after section of the cord is undoubtedly vaso-motor paralysis. Normally, the temperature of the interior of the body is maintained by keeping an outer layer of partially-cooled tissue between the internal organs and tissues and the outer air. When, however, the power of contracting the superficial vessels has been lost, the organism can no longer maintain this protecting layer, the surface-temperature rises, heat is rapidly lost, and soon the whole body becomes uniformly cooled.

Vaso-motor paralysis is produced by toxic doses of various remedies, and under these circumstances artificial maintenance of the bodily temperature is imperative, forming a most important portion of the treatment of all such *poisoning*. *Collapse* from any cause is largely dependent upon, or, more correctly speaking, largely is, vaso-motor palsy: hence in almost all forms of collapse the use of external heat is of great importance.

Dr. Charles Hunter, of this city, has very successfully applied this treatment to that form of collapse which follows injuries and surgical operations and is known by surgeons as *shock*. The lack of power of alcoholic and other ordinary stimulants in this condition is proverbial. The pathological state is undoubtedly vaso-motor palsy, the bodily temperature is much below normal, and the rational treatment consists in the hypodermic use of atropia and digitalis and the external employment of the hot bath. This plan of treatment will probably be found to be a very important addition to surgical therapeutics. In the first days of post-fœtal life the power of resisting external cold is very slight, and in many cases of still-born children, or of children whose vital powers are almost extinguished at birth, life may be saved by a high external temperature, the little waif being kept in an air of 90° to 100° Fahr., and from the influence of cold walls which shall draw off, as it were, the little store of heat provided by nature; for there is no doubt that radiation is greatly affected by the temperature of surrounding objects.

It is hardly necessary to dwell in more detail upon the various forms of collapse. Enough has been said to illustrate the principle that *whenever the bodily temperature falls below normal, pyretic treatment is demanded.* The vigor of the treatment should always be in direct proportion to the suddenness and extent of the fall of temperature.

In regard to the methods of applying heat, it must, in the first place, be understood that wrapping in blankets, etc., are only useful as a means of preventing cooling of the body; that when the animal temperature has already fallen they will not suffice at all. The same may be said of air heated to temperatures which can be readily obtained or can be borne by the attendants. Radiated heat is somewhat better, and often the use of a brisk open fire is of service. The *hot bath* is, however, the only pyretic remedy which can be relied on, when a Turkish bath is not at hand. It should always be a full bath, in as warm a room as can be procured, and should be at a temperature of about 103° Fahr., when the patient is put into it. The duration of the bath must vary with the

circumstances of the case. Frequently, ten minutes will be long enough, but if the mouth-temperature does not rise to normal, a much longer tarriance may be advised. During the bath the heat of the water should steadily be increased as fast as it can be borne, if the patient be conscious. It will be found that 110° is about the limit of endurance for most persons; and in unconscious subjects this limit should not be passed.

## CORRESPONDENCE.

### LONDON LETTER.

THERE is not much of interest going on in the medical world here, as the receipts this Christmas, except with a very small number, have fallen far below the usual amount, and the Anglo-Saxon is chiefly impressionable on his pecuniary aspect. Christmas, with its festivities, is over, and now the bills have to be faced, and economy is the rule of the day in doctors' houses as well as elsewhere. One piece of medical news there is, and it is this: that Sir William Jenner has relinquished his connection with University College Hospital, where for so long he has been a respected teacher. Sir William Jenner is a man who does honor to his profession, and whom the profession delights to honor. Straightforward, honest, abrupt, single-minded, without wile, he is trusted by every one, from her Majesty downwards. As a clinical teacher he is almost unrivalled, and the best evidence of his teaching power is shown by the reverent spirit in which his old pupils repeat his maxims. Jenner's pupils seem never to forget his teaching,—very fortunately for them. Diagnosis is Jenner's great forte. He has a clear, discriminating intellect, at once penetrative and reflective. He recognizes minute points, and, further, appraises them correctly. The distinction between typhoid fever and typhus had been largely made out by A. P. Stewart and others before Jenner came to it; but he placed the matter beyond all doubt; and where he put it it remains. Work—honest, sound, genuine work—is the foundation on which Jenner's reputation is based. No adventitious aid has he had from an easy address or an insinuating manner. He is abrupt to a degree slightly trying,—to put it mildly,—and has none of the air of a courtier. Familiar with royalty, he does not in the least look like one's ideal of a queen's physician, which is just what Dr. Wilson Fox, who is Physician Extraordinary to the Queen, looks to the life. But his manner is impressive, and such as to gain the confidence—I may say the undivided confidence—of those who consult him. Now at the top of the ladder, he had hard work to mount the first rung. Pure merit gained him the professorship of Medicine at University College Hospital, where for long he remained, respected, but still a poor man. By a railway accident Dr. Bailey, the court physician, was killed suddenly in the prime of life. Such an event being quite unforeseen, the question of who should succeed him was an open one. The verdict of the profession was almost unanimously in favor of Jenner. His star was now in the ascendant. Not long had he been the court physician when the Prince Consort was seized with typhoid fever. Every one knew—the court and the profession alike—that Jenner was the right man in the right place, and though the Prince died, still the public confidence in Jenner was strengthened and confirmed by his management of the case. Ten years later the Prince of Wales was stricken down by the same malady which had proved fatal to his father. This time Jenner's skill and assiduity were rewarded by a more fortunate result: perhaps a more youthful constitution was not without influence over the result. Since then Jenner has had a large practice and been a busy man. Once more, in December last, Jenner stood by the bedside of one of the royal house of England, the ill-fated Princess Alice of Hesse-Darmstadt. By a curious coincidence, again the disease was one with which Jenner's name was linked. In 1860 he wrote on diphtheria, the malady under which the Princess labored. But this time his skill was again in vain. The 14th of December was fatal to her, as it was to her father, whose devoted nurse she was seventeen years before. Thus it will be seen that Sir William Jenner has been associated with the royal family of England in some of the most eventful and painful episodes in the history of this generation of it. But, whatever the result, fortunate or deplorable, Jenner's skill and vigilance have never been questioned for a moment.

The demands of a large and lucrative practice have at last compelled Jenner to dissolve his connection with his old school, where his well-known figure will be seen no longer. But pleasant reminiscences of him will linger long about his old haunts, and stories will be told of him when his honored head is laid low,—may that be far distant! is the fervent wish of all,—stories of his own hard struggles in his early days, stories of his keen sympathies with the struggles of other men, and of his readiness to help them. Like other men of fine fibre, his own hardships make him more susceptible as to the difficulties of others, and the friendly help which lifted many a man out of the slough of despair is known to have come from Jenner. Counsel and guidance was he ever ready to give to the hard-working, hard-up student. Material aid after the student days were over has he given to many. Many of the men who now are winning fame

for themselves owe their chances of success to Jenner. Unostentatious by nature, he did good by stealth; and the warmth with which many of his old pupils speak of him is due as much to gratitude to him as to well-founded admiration.

As an instance of his perfect *abandon* and absorption in his work, the following story is told. Entering the pathological room one day, he remarked how few students were present, when his house-physician explained that it was "Derby Day," the day of the national race. "Derby Day, sir!" said Jenner, with unconcealed surprise: "when I was a student, I knew as little when it was Derby Day as when it was Trinity Sunday." Jenner's mind was evidently not cast in a devotional mould.

Jenner is rather a clinical teacher and a diagnostician than a therapeutist; but he is no unbeliever in remedies, and his treatment is ever sound and judicious. As an evidence of his very acute, indeed minute, observation may be adduced his article on "Rickets" in the System of Medicine. The sketch of a rickety child is simply perfection; yet this is not due to any especially attractive literary power, but rather to the exceeding keenness of the observation. In all Jenner's writings good, clear common sense is conspicuous, and his articles are well worth reading and studying. Unfortunately, they are not gathered together, but are scattered about. His pupils, who have had the advantage of his systematic lectures, have a great advantage over those who have to search for his articles and then only get fragmentary scraps of his well-garnered information. Jenner is the recognized head of the profession in England, and well deserves the post. One thing only is there against him, and on this opinions may differ. The junior men hold that, with Sir William Jenner's recognized ability and extended experience, he ought to charge larger fees than he does. That he does not do so is probably due to his unselfishness and sympathy with his patients: still, if he will continue to give his advice for a guinea, the prospect is not brilliant of other and junior men getting two.

That his resignation of his post at University College Hospital is a loss to the school cannot be questioned for a moment; but he leaves behind him some strong juniors, who will uphold the fame of the Hospital school. Sidney Ringer, whose "Handbook of Therapeutics" is known wherever English-speaking doctors are found, takes the chair of Medicine, while Fred. Roberts, whose "Principles and Practice of Medicine" is now the recognized text-book at all medical schools, ascends the chair of Materia Medica, where his acute mind and clear reasoning-powers will maintain the reputation given to the chair by his immediate predecessor. In spite of the wealth of the old-established schools, St. Bartholomew's, Guy's, and St. Thomas's, poverty-stricken University College Hospital, with its one hundred and thirty-six beds,—scarcely more than the number belonging to one surgeon at the largest hospitals,—maintains its place as the premier teaching hospital in London. It is not the number of beds which makes a reputation. Skoda only had one ward of twelve beds in Vienna, but the world listened respectfully to what was spoken from that ward, more attentively than to the utterances from twenty large hospitals all put together. So from this little hospital in Gower Street goes forth teaching which will and can hold its own against all comers. With such a list of names as Russell Reynolds, Charlton Bastian, Henry Maudsley, Graily Hewitt, Burdon Sanderson, Tilbury Fox, John Marshall, Christopher Heath, Berkeley Hill, Ray Lankester, and others who will in time earn equally famous reputations, University College is not only great but growing. There is no threatening senile decay, no looming falling-off,—which is not the invariable rule in the London hospitals at present.

The subject of "The Premurmuric Stage of Aortic Valvulitis" was discussed recently at the Harveian Society. The paper was read by the present writer, who took up the position that in the present state of our knowledge it is not always necessary to wait for the presence of a murmur before deciding that mischief is afoot in the aortic valve-cusps. As regards the origin and the causal associations of aortic valvulitis, we now know so much that we can tell with fair certainty that the aortic valves are becoming implicated before the stage of a murmur is reached. Putting aside the comparatively rare cases, chiefly females, where the aortic valves are implicated in the inflammatory endocardial complications of acute rheumatism, the causal associations of aortic valvulitis are two,—(1) effort and (2) chronic Bright's disease. Aortic valvular disease is common amidst strikers, that is, men who wield "the big hammer" in iron industries. The efforts of these men are severe during the time the iron is hot on the anvil. In order to deliver more determinate blows, they have to posture, involving setting all the muscles of the lower limbs and back into action. Thus, when the blow is delivered, the muscles of the whole body, not even excepting the muscles of expression, are put into contraction simultaneously; and at the end of each "heat" the striker's heart beats violently and with much excitement. The demand upon the heart has been great, and its contractions are energetic. Scarcely has the condition of the circulation quieted down, when another "heat" calls upon the striker for active efforts.

Aortic valvular disease is not, however, the first modification of the vascular system produced by sustained violent efforts. Enlarge-

ment of the heart, hypertrophy, is the first change. Where the heart is unequal to this nutritive change, and palpitation comes on, the striker applies to the physician. If he be counselled to leave his occupation, and take the advice, no further heart-mischief follows; but if he determine to continue his occupation, then digitalis and iron will usually enable the heart to develop the requisite hypertrophy, and the case progresses as do those where no warning palpitation has told that modifications of normal processes are initiated.

Many of the muscles of the limbs cross the arteries and compress them in contraction. In certain carnivora the femoral artery has a ring of bone thrown out from the femur in order to keep off the pressure of the muscles when firmly contracted. In general muscular contraction the flow of the blood is impeded, and the large arteries and the aorta are filled with blood, and the blood-pressure in them is high. The opposition offered to the outflow of the blood on the ventricular systole results in hypertrophy of the left ventricle. The blood is now driven into the aorta with abnormal force, the arterial system is forcibly distended, and the rebound of the elastic vessels is in strict proportion to their distention. The consequence is that the aortic valves are closed with undue force, and inflammation, slow and gradual, is set up. The forcible closure causes the valve-cusps to be driven together violently, and accentuation of the aortic second sound follows. This is the first indication of approaching change. Sooner or later, according to the irritability of the tissues in different persons, a murmur is produced, telling of insufficiency of the aortic cusps. But when a murmur is produced, the disease has made much progress, and much mischief has been done. The disease is too frequently progressive, and goes on from bad to worse; the muscular compensation wears out, and the patient dies. But the murmur comes too late for successful preventive measures, and unless something can be done before the stage of murmur-production is reached, the patient gets little succor from the healing art.

Then, again, in chronic Bright's disease, when the vascular system is implicated, chronic aortic valvulitis is commonly found. Here, again, there is strain put on the aortic cusps, and disease is set up in them in time. There is first arteriole contraction and a high arterial tension set up by waste nitrogenized material in the blood in excess; the obstruction offered to the blood-flow induces hypertrophy of the left ventricle, and the high blood-pressure in the arteries is maintained until atheromatous changes are set up. Here we find a distinct series of symptoms: a firm, incompressible pulse, not obliterated by pressure of the finger; often the artery feels hard from changes in its walls; an hypertrophied left ventricle; a copious flow of urine, which, Traube has pointed out, is the measure of the arterial pressure being high, is also present; and accentuation of the aortic second sound, from the violent closure of the aortic cusps. Such are the four associated indications. The high blood-pressure in the arteries, and the forcible closure of the aortic valves, lead, in time, to aortic valvulitis of a chronic character. Such, then, are the associations of aortic valvular disease.

When the above-described condition is found, we know that aortic disease may follow. Is it desirable, then, that the morbid process should be allowed to go on until disease is well established, as evidenced by the unmistakable testimony of a murmur? Something may be done to stave off the threatening valvular disease, whose consequences are so disastrous, if the indications can be read aright and in time. In the striker's case change of occupation, in the case of chronic Bright's disease a change of dietary,—the giving up of all superfluous albuminoids,—will probably arrest or retard the onward progress of the process.

An attempt was made to show that in some cases there is a certain amount of muffling of the aortic second sound, intermediate betwixt the stage of accentuation and the development of a murmur. In the discussion which followed, Drs. W. H. Broadbent, Arthur Sansom, and Stephen Mackensie took part. The stage of accentuation and the associated condition described were admitted by all. Dr. Broadbent questioned the stage of muffling. He said he had often followed the stage of accentuation of the aortic second sound to the development of a murmur and to angina pectoris, but he had never heard the muffling. He had heard a murmur developed while the loud aortic second sound was still distinct. This, he said, was due to the fact that the second sound of the heart is not due, as is generally supposed, to the closure of the semilunar valves. Dr. Sibson had demonstrated, beyond all further doubt, that the second sound was due to tension of the arterial roots,—the sides as well as the base formed by the semilunar valves. Consequently a regurgitant murmur might be heard while the aortic second sound, due to the tension of the base of the aortic column, could also clearly be distinguished. As to the significance of the accentuated aortic second sound, there could be no doubt that it was one of our most important diagnostic indications. Dr. C. J. Hare pointed out that this accentuation was often heard for years without aortic valvulitis developing itself. The whole tenor of the discussion was strongly in favor of the view propounded, viz., that there is a stage of aortic valvulitis before a murmur is produced; that, indeed, a certain and distinct amount of disease is requisite to the production of a murmur.

The whole of our knowledge of the causes,

origin, and progress of diseases of the heart, alike in the muscular walls and the valves, is such now that we no longer rest satisfied with a diagnosis that certain disease is present at certain orifices and that this is accompanied by a definite muscular change in the heart-walls. From this fragmentary view we can construct the past history of the case and forecast the probable future. From the history of one case we can recognize another at an earlier stage. A knowledge of the causation leads up to preventive as well as palliative treatment. For purposes of insurance such knowledge is imperative; in the interests of the patient himself, such knowledge is most desirable.

One of the side-issues raised in the consideration of aortic valvulitis was that of how far it may become static under favoring circumstances. Latham first showed that mitral disease resulting from acute endocarditis is often static, non-progressive, and without tendency to get worse, in certain fortunate cases,—a fact borne out by one's own experience. How far aortic valvulitis can be arrested and brought to a stationary condition is a subject not yet settled. It is a very important matter, however.

J. MILNER FOTHERGILL.

## PROCEEDINGS OF SOCIETIES.

### PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, DECEMBER 12, 1878.

THE PRESIDENT, DR. H. LENOX HODGE, in the chair.

*Abdominal tumor from a child æt. 13 months.* Presented by Dr. JOSEPH V. KELLY.

E. S., æt. 13 months, was perfectly healthy from birth until nine months old, when the abdominal tumor was accidentally discovered by the mother. I saw the child within a few days after this discovery, and at that time the tumor occupied half of the space of the abdomen, the largest bulk being on the left of the median line. The little patient suffered, apparently, but little from pain, and there was no vomiting or diarrhœa. Previous to death, the abdominal veins were distended and a moderate amount of effusion was detected. At the *post-mortem* the tumor seemed to spring from the omentum and intestines, and was with great difficulty enucleated from the abdominal viscera, excepting the liver and spleen, which were apparently healthy. There is no history of cancer in either the father's or the mother's people.

*Report of the Committee on Morbid Growths.*—"A histological examination of the abdominal tumor presented by Dr. Kelly demonstrates the new formation to belong to the typical class of growths, consisting of a single tissue, having its prototype in the physiological striated muscular tissue. It is composed of long narrow fibres measuring the one three-thousandth of an inch in width, many of which present a transverse striation seen with a power of 500 diameters; upon the fibres are found numerous oval nuclei. The arrangement of the fibres is in bundles, which run in every direction. The new formation may be classified as a myoma, variety rhabdo.

"December 26, 1878."

*Sarcoma of the neck.* Presented by Dr. CARL SEILER.

Eliza B., æt. 65, presented herself at the Dispensary for Throat Diseases at the University Hospital on the 21st of January, 1878. She complained of difficulty of deglutition and a swelling in the anterior region of the neck. By questioning her it was found that she had a slight cough, with yellowish expectoration, but no hoarseness or soreness of the throat. The swelling in the neck, she said, had made its first appearance about six months previous, as a small hard lump in the right side of the neck, and had been growing ever since. The difficulty of deglutition had, however, been noticed only a few weeks ago, and was growing daily worse.

On examination, it was found that a hard tumor was situated in the anterior region of the neck, reaching from the hyoid bone down to within a half-inch of the right clavicle. It was but slightly movable, and appeared divided into two unequal parts by a longitudinal depression corresponding with the isthmus of the thyroid gland. On palpation, the tumor felt hard and nodulated.

A laryngoscopic examination revealed the epiglottis to be so pendent as to obscure all view of the laryngeal cavity. On raising it by means of the epiglottic forceps, it was found that the lateral diameter of the larynx was very much elongated; the mucous membrane presented a healthy appearance.

As an operation for the removal of the growth—which was supposed to be a scirrhus of the thyroid—was deemed inadmissible, tincture of iodine was injected into the tumor, with the result of reducing it somewhat. The neck at first measured around the point of greatest swelling sixteen and one-half inches, while a few days after the injection it measured at the same point but sixteen inches.

The difficulty of deglutition, however, steadily increased, until the patient was unable to swallow anything, and was kept alive by nutritious enemata. The cough increased, also difficulty of breathing, and the expectoration became brownish. Owing to the feeble state of the patient, a physical examination of the lungs, as well as an exploration of the œsophagus, was not made. She died on the 12th of February of the same year, about three weeks after I first saw her.

At the post-mortem examination, at which

Dr. Curtin kindly assisted me, the body was found emaciated, but not as much so as might have been expected.

The abdominal viscera were found to be normal. The lungs were congested, presenting a few calcareous nodules. In the neck was found a large tumor, of firm consistence and of about the size of two fists, involving the trachea, larynx, œsophagus, and the internal carotid artery on the right side.

On microscopic examination, this tumor proved to be a spindle-cell sarcoma, containing giant cells.

*Rectal calculus.* Presented by Dr. R. W. DEAVER.

On the 1st of November, Mrs. Y., a monthly nurse, æt. 55, called my attention to a small "hard lump" situated just within the anal orifice, which, she said, had first made its appearance six weeks previous. She stated that it was loose and movable, and that in the process of defecation it came down, acting like a ball-valve, so completely shutting off the canal that she was only able to have a motion of the bowels by placing her finger in the anus and holding back the "lump," allowing the fæces to pass beside the finger.

Previous to its appearance her bowels had been very regular and moved daily; now she would allow them to go four and five days, on account of the annoyance.

Digital examination proved the existence of a rounded tumor about the size of a pigeon's egg within the sphincter, covered by mucous membrane, and at first gave the impression of a fibroid on the posterior aspect of the uterus; but upon making a vaginal exploration with the finger it could not be felt. It was readily pushed up by the finger in the bowel, but the mucous membrane covering it was always present. As the examination gave her considerable pain, I concluded to resume it under ether, which I did the following day, with the assistance of Dr. Müller. As soon as the anæsthesia was complete, Dr. Müller passed his finger into the rectum and verified the covering of mucous membrane, but, by pushing it up as far as his finger would pass, dislodged it from its pocket into the bowel, from which it was easily removed.

There was no history of biliary colic further than an attack of cholera morbus some two years ago, which had been treated by homœopathy and herself. Ten years ago she had a perineal abscess, which was opened by the knife, and healed slowly, and from which there is a small, non-suppurating fistule, involving the muco-cutaneous membrane, a quarter of an inch from the anal orifice, and without the sphincter.

*Report of the Committee on Morbid Growths.*—"A section of the rectal calculus presented by Dr. Deaver showed it to consist of a nucleus, body, and cortex.

"1st. The nucleus.—This was found to consist almost entirely, if not entirely, of granules of altered bile-pigment, apparently containing neither cholesterin nor any appreciable quantity of inorganic salts.

"2d. The body.—This was made up principally of cholesterin arranged in a radiating manner around the nucleus. A small amount of bile-pigment, also earthy salts, were diffused throughout this portion.

"3d. The cortex—Consisted of laminæ arranged around the body as a rind, and was composed of cholesterin, with a large proportion of bile-pigment and earthy salts.

"The presence of glycocholic acid was determined from a watery extract made of both the body and cortex. It no doubt was diffused through both.

"Microscopic examination demonstrated the presence of crystals of cholesterin and phosphates.

"December 26, 1878."

*Gangrenous inflammation of the duodenum.* Presented by Dr. J. T. ESKRIDGE.

I am indebted to Dr. C. for the history of the following case.

"Mrs. E. M., æt. 55, born in Norfolk, Va., where she lived for thirty-nine years, eighteen years married, sixteen years a widow, mother of four children, was a large, muscular woman, always enjoying excellent health till about 1874, when, living in Washington, D.C., she had intermittent fever at different times, and occasionally suffered from what she called 'cramp colic.' Some of these attacks were marked by persistent nausea and violent vomiting. Her father suffered from no hereditary disease; her mother died of cancer of the uterus. Beyond this, no positive history of cancer could be traced to other members of her family.

"September 16, 1878, she was seized while walking the streets of this city, about one and a half squares from her residence, with a sense of weight in the epigastrium. She hastened home, threw herself upon the lounge, and had a severe chill or rigor, attended with great nausea and vomiting. I saw her about fifteen minutes afterwards, and found her somewhat delirious, with severe retching eructations of a brownish frothy fluid, pulse 120 per minute, weak and fluttering, cold extremities, large drops of cold, clammy perspiration covering the surface, but she crying that she was burning up, and begging for ice-water to cool her internally. Gleaning a history of malaria, I suspected a congestive chill, and treated my patient accordingly, and also endeavored to relieve the nausea and pain of which she complained.

"September 17, morning.—She is more comfortable; nausea continues, with lightness of head and dimness of vision; there is no pain over the epigastrium, but there is great tenderness to the touch in this region; pulse 112, temperature 103°; tongue covered with a grayish fur, papillæ enlarged, and bowels constipated. The bowels are so stubborn as to

require active and powerful purgatives before a slight evacuation from them is effected. The stomach is very irritable. Citrate of magnesium is the only agent I find that will check the vomiting. The stool on this occasion is dark.

"September 18.—Two days after my first visit I learn that she had been delirious during the night; complains of great pain in head and left hypochondrium, and inability to lie on the left side. Nausea and vomiting still troublesome; bowels opened once; pulse 118 and weak; temperature 103½°; first sound of heart weakening.

"September 19.—Pain in splenic region much greater; stomach more tolerant; pulse 116, temperature 103°, and bowels costive.

"September 20.—Vomiting checked, but nausea continues; bowels opened once; stool dark; pulse 112, temperature 103°; pain in same region.

"September 21.—Pain referred to epigastrium instead of the splenic region; pulse 110, temperature fallen to 102½°.

"September 22.—Tongue reddened at its tip and edges, but heavily coated in the centre; intense pain in the epigastrium; pulse 110, temperature 102½°; bowels opened twice.

"From this time she gradually improved; pulse and temperature both decline gradually till, October 1, she is able to sit up for a short time, though she presents a very sallow appearance, as she has done throughout her illness. The conjunctiva is clear. Between this time and November 16, the beginning of her fatal illness, I saw her several times. She never grew strong, and required a smart purgative to unload the bowels.

"November 16.—I am summoned hurriedly, and find her with a severe chill or rigor, nausea, vomiting, shortness of breath, and great pain in the right hypochondrium. Supposing a return of malarial trouble, I treat as on September 16.

"November 17.—The nausea and shortness of breath continue; a constant dull pain in right hypochondrium, extending over epigastrium; pulse 85, temperature 101°; bowels constipated for several days, urine scanty.

"November 18.—Bowels opened once; shortness of breath more marked; sits up in bed and gasps for breath; yet I am unable to detect any abnormal condition of heart or lungs; pulse and temperature same as the day before.

"November 20.—Patient delirious during the night; is very despondent, and says she will not live; shortness of breath and tenderness same as two days ago; great tenderness over the epigastrium; pulse 90, temperature 100°.

"November 21.—More delirious; gradually sinking; pulse 95, temperature 101½°.

"November 22.—Delirium increasing; pulse and temperature the same; a smothering sensation. The next day the pain is most intense over the pyloric region of the stomach; pulse 100, temperature 102°.

"November 24.—Pulse 105, temperature 102½°; is very much prostrated; a craving for food at 2 A.M; spat up blood during the night, and does not attempt to move the right arm from the morning of the 24th till the morning of the 26th, when she died.

"November 26.—Pulse 118, temperature 103°; apparently insensible, but evinces evidence of pain when touched in the epigastrium. She died calmly on the morning of the 26th.

"Her treatment throughout both attacks of her illness consisted in large doses of quinine, morphia, and brandy when there was any evidence of the vital forces failing; besides, calomel was used in small doses, and a fly-blister from time to time over the painful portion of the abdomen."

*Autopsy*, twenty-six hours after death, by Dr. Eskridge.—Body appeared well nourished; no abnormal amount of fluid in the abdominal cavity; liver, kidneys, and pancreas apparently healthy. Spleen small, and covered by little vesicles; its interior was intensely reddened and granular as seen by the unaided eye. The mucous membrane of the stomach was congested, but no ulcerated spots; its walls apparently normal throughout. Mucous membrane of the duodenum almost black, ending abruptly, about twelve inches from the pyloric valve of the stomach, in almost healthy mucous membrane, its walls very dark and easily torn, and surrounded by a localized peritonitis. The remaining portion of the bowel appeared healthy. The gall-bladder contained a large gall-stone. The uterus was inflamed and enlarged, its appendages normal. The thoracic cavity and the cranial were not examined.

*Remarks.*—Had I known the history of the case for the last week previous to death, I should have examined the thoracic cavity. From the history, in the absence of an autopsy of that cavity to the contrary, a pneumonic inflammation may justly be suspected. The doctor under whose care she was during her illness did not suspect any trouble in the bowels, and especially none of an inflammatory character: hence the rather free use of purgatives, which his good sense would have taught him to avoid if he had been aware of the real trouble.

He tells me that he was not satisfied with his diagnosis, but suspected malarial poisoning, inflammation of the liver, and probably cancer of that organ, and possibly of the stomach or adjoining viscera.

*Report of the Committee on Morbid Growths.*—"A microscopic examination of the spleen from the case of gangrene of the duodenum presented by Dr. Eskridge exhibits the changes peculiar to chronic inflammation, viz., an increase of the fibrillar connective tissue of the organ. This is particularly evident around

the blood-vessels, where the adventitia is seen in a manifest state of proliferation.

"December 26, 1878."

## GLEANINGS FROM EXCHANGES.

POISONING BY ACONITE, BY LIQUOR AMMONIÆ, BY SWEET SPIRIT OF NITRE (TWO CASES).—Several cases of poisoning have been reported in the London journals in the last month or so. Of these, one is the case of a servant-maid of 21, who swallowed two ounces of a liniment composed of equal parts of aconite liniment and almond oil, the aconite liniment containing one ounce of root to one of spirit. Directly she had swallowed it she noticed a nasty taste in her mouth, and immediately felt a tingling sensation in her lips, mouth, and tongue; her teeth felt as if they were loose, and her lower jaw felt dead. Tingling then began in her fingers and extended all over the body, and she felt numb. Attempting to go down-stairs, she fell when she had reached the bottom. Fifteen minutes after the ingestion of the poison, she was found in an hysterical condition, with the pupils dilated. Twenty grains of sulphate of zinc were at once administered, which produced copious vomiting. She became unconscious a little later, and was admitted to a hospital two hours after having taken the aconite. On admission, she was in a state of collapse, the surface of the body cold, the pulse almost imperceptible, respiration quick and shallow, the alæ nasi dilated, and the pupils widely dilated. The stomach-pump was passed and the stomach emptied. Brandy and hot coffee were then given freely, the patient being able to swallow fairly. She was placed between blankets, with hot bottles to her feet. Half an hour later the surface of the body became warmer, the teeth chattered, the pulse was 75, small and feeble, and the respiration catching. There was contraction of the muscles of the abdomen and thorax which caused her to spring up in bed. Nitrite of amyl inhalations relieved the spasms, the pulse became stronger, and the deadly pallor of the face disappeared. After this she became more sensible. By the end of five hours from the original accident the patient was perfectly sensible. She soon went to sleep. Temperature taken two hours after admission was found to be 95.5°. Four hours later it was 99.8°. She passed a good night. Next morning she complained of soreness of the mouth. She was discharged, cured, at the end of four days.—*Lancet*, December 28, 1878.

A case of poisoning by liquor ammoniæ is reported in the *Medical Times and Gazette* for December 21, 1878. A man 64 years of age swallowed half a pint of the liquor with suicidal intent. Shortly after, an emetic of mustard and water with castor oil was administered. When admitted to the hospital, four hours later, he was semi-conscious, his pupils were widely dilated, and his breathing noisy and hurried; pulse very rapid, profuse sweating. The patient complained of great pain in the abdomen, and while under examination vomited a quantity of blood, mucus, and shreds of mucous membrane. Six hours later, he was very hoarse and was drowsy; face dusky and skin dry; temperature 100.8°, pulse 130. He had again vomited blood and mucus. Next morning his lips were swollen, tongue dry, and mucous membrane of the mouth partly eroded. The fauces were extremely congested, and almost met in the middle line; the mucous membrane looked œdematous, softened and inflamed. There was great pain and tenderness in the abdomen on the slightest pressure. Tympanites marked; bowels open three or four times during night, no blood in stools. Had vomited blood twice since the night, and complained of burning pain in the throat and pit of the stomach. In the evening, coma, dyspnœa, respirations 66, pulse 180. Incessant retching from the first. Patient died thirty-six hours after swallowing the medicine. Post-mortem examination showed signs of inflammation all along the digestive tract. The mucous membrane in the stomach was charred and destroyed, and there was great congestion as far as the lower end of the jejunum. The stomach contained about ten ounces of dark altered blood.

In the *Lancet* of November 30, 1878, is a report of the case of a child about 3 years of age who swallowed between three and four ounces of sweet spirit of nitre. On examination the patient was found in a state of collapse, cold, almost pulseless, insensible, both pupils widely fixed and dilated, breathing hardly perceptible. He had previously vomited undigested food, but no blood. Under treatment the patient rallied for a few hours, but died in the evening. Post-mortem examination showed inflammation of the mucous coat of the stomach, with thinning in places, duodenal end of small intestines red, inflamed, and bile-stained; kidneys slightly congested (there had been albuminuria), membranes of brain highly congested, containing a large quantity of dark-colored blood; brain soft, pulpy, and quite wet; vessels congested; no traces of fluid in the ventricles.

A case of non-fatal poisoning by spirit of nitre is reported in the *Lancet* for January 4, 1879. The patient, a boy of 18, had taken an ounce of the medicine thrice daily for three weeks. His symptoms were suppression of urine, drowsiness, headache, some mental aberration, etc. He was relieved by dry cupping, aperients, and poultices over the kidneys. The first urine passed was slightly albuminous, but he made a good recovery.

BAVARIAN PLAN OF TREATING FRACTURES.—Dr. Dawson (*Maryland Medical Journal*, January, 1879) gives a careful description of the plaster-of-Paris *movo-amobile* apparatus

used so extensively in the Franco-Prussian war. It is applied as follows. It must be put on so as to press evenly all parts of the limb, or it will be worse than a failure. It must fit as exactly as a well-fitted stocking. If a fracture of the leg is to be dressed, two pieces of coarse flannel are selected that will extend from just above the condyles of the femur to three or four inches below the heel and are wide enough to envelop the leg. These are sewn together down the middle by two seams a quarter of an inch apart; this is to form a hinge. Between the hinge no plaster is admitted; it must not reach the flannel along this line. Then place this under the limb so that the hinge-line may be directly in the middle. Bring the sides of the inner layer up, and join them with a seam along the tibial spine, down over the dorsum of the foot, to the space between the great and second toes. Now sew together that part of the inner layer which is below the heel; make this union *along the sole of the foot* to correspond in line with the junction on the front of the leg. The foot and leg are now completely stockinged, and the superfluous flannel is cut down to leave a roach about an inch wide. Mix the plaster with cold water, and, while the assistant is pouring it over the stockinged leg, apply it evenly to all parts with the hand. Then spread it over the inner surface of the outer layer of flannel, which lies flat out, and afterwards bring this up and adjust it to the inner layer smoothly. The hand here also must be the instrument for moulding the parts, for pressing the plastered flannel, for adjusting it to all the elevations and depressions of the limb. Where the two layers come together at the roach the angle must be a sharp right angle; there must be no want of fit, no irregularity in the line. In this the hands of the assistant may be used in pressing the parts into position. To examine the fracture at this stage, or later, the stitches uniting the inner layer may be cut and the sides pressed apart like the valves of a clam-shell, the hinges on the posterior of the limb permitting this. The case or splint can be kept in place, after it has been divided, by cutting notches in the roach and at each notch surrounding the limb with a fillet of muslin. These fillets can be untied and the splint laid open for inspection with great ease. Openings for the escape of pus, etc., can be made in this splint to a considerable extent without impairing its value. The advantage which it possesses over other immovable splints is that it may be put on at once, helping to prevent swelling, and acting as extensor and counter-extensor by virtue of its hold on the trochanters and malleoli. Shortening, Dr. Dawson says, *cannot* occur. If the swelling subsides so that the case becomes too loose, a mattress of lint or cotton batting can be laid in and the leg again enclosed. The lining makes a pleasant addition.

EXPERIMENTS UPON THE FERMENTS (*Virginia Medical Monthly*, October, 1878).—Dr. Richard H. Lemmon, after many experiments upon the animal fluids, comes to the following general conclusions.

(1.) That quinia sulphate possesses more powerful anti-fermentative properties than any agent yet tried. In the proportion of one part of the salt to 160 of fertilized water, it prevented for nine days the development of infusorial life; although after four days it did not prevent the surface-formation of a mucedinous growth.

(2.) Creasote stands next, and, perhaps, should have been placed first, as it prevented fermentative creation—both animal and vegetable—for eight days.

(3.) Then comes carbolic acid, having kept its infusion fresh for three days; and, lastly, salicylic acid must be placed at the bottom of the list, having prevented fermentative action only eight hours. The unprotected jar required one day, and that containing potassium salicylate, thirty-two hours, for the production of infusorial life.

The extreme volatility of amyl nitrite accounts for the fact of its having no power to delay fermentative action, notwithstanding its unequalled power of destroying existing life. The experimenter was not able to retain it in an infusion exposed freely to the air.

He looks for far better results in antiseptic work of every description from the use of quinia sulphate and creasote solutions than we now have from the universally used carbolic acid. In the case of quinia sulphate, it may be used effectually in the proportion of one part of the salt to 160 parts of water, the solution being rendered soluble by a minute quantity of hydrobromic acid. Such a solution would be much less irritating to the skin than the carbolic acid solution ordinarily used (that used by Lister being carbolic acid one part, water 30 parts). Also, the dressings might safely remain unchanged three times as long as in the case of carbolic acid. The latter advantage is most obvious to the surgeon.

DETERMINATION OF SEX BY THE DATE OF CONCEPTION (*The Boston Medical and Surgical Journal*, January 26, 1879).—Dr. J. B. Swift quotes Dr. Heitzmann, of New York, as propounding the following theory, and briefly mentions twenty cases which have come under his notice and which seem to confirm it.

The ovum represents the female element, the spermatozoa the male. We know that it requires only a few spermatozoa, perhaps a single spermatozoon, to impregnate an ovum. If an ovum becomes impregnated by a few spermatozoa, the female element will be in excess, and the result will be a female. If, on the other hand, a good many spermatozoa impregnate the ovum, the male element will preponderate, and a male will result. Now, if an ovum is high up, that is, in the ovary or at the fimbriated extremity of the Fallopian

tube, probably only a few spermatozoa will come in contact with it. But if the ovum is low down, then many spermatozoa come in contact with it.

If menstruation and ovulation are dependent the one on the other, as many authorities affirm, then the situation of the ovum may be determined by the menstrual period. During the interval between the periods the ovum is in the ovary. Just before the flow begins the ovum may be on the surface of the ovary or in the fimbriated extremity of the Fallopian tube. As menstruation goes on, the ovum descends, and the flow may entirely cease before the ovum is discharged. Then it is low down in the Fallopian tube, or even in the uterus itself.

Now, if coition takes place during the interval between two periods, or just before menstruation begins, the ovum being high up, only a few spermatozoa pass up the Fallopian tube and reach it; but if coition is just after menstruation, then the ovum is within the reach of many spermatozoa.

Stock-breeders understand this. If they want a female they put the two sexes together at the beginning of the rutting period, but if a male is desired they wait until the female has been in heat some time.

LATE HEREDITARY SYPHILIS (*The Cincinnati Lancet and Clinic*, January 11, 1879).—In the Society of Physicists and Physicians, Dresden Session, Dr. Seiler made a report on "*syphilis hereditaria tarda*" and affections differing from syphilis hereditaria recens-natorum, or infantilis, in the following distinctive peculiarities:

1. The first symptoms never occur earlier than the fourth year after birth.

2. The symptoms show at once the character of the so-called tertiary syphilis, *i.e.*, gummatous periostitis, gummata of the liver, of the brain, of the skin, etc.

3. The symptoms often show an inclination to natural cure, exactly as do the gummata of acquired syphilis, which latter fact must be regarded as established.

Seiler agrees in the main with Kassowitz, but differs from Lewin, who believes in infection from the blood of the mother.

The fifth statement of the author is the most important. "With the resolution or disappearance of the secondary symptoms and occurrence of the tertiary ("gummatous stage" is a better term) necessary or unconditional heredity ceases. The inheritance of gumma follows from other laws. It is a disposition like scrofula.

The author takes up the question "Should a healthy woman who has conceived from a man notoriously having secondary syphilis be subjected to mercurial treatment?" This question is answered affirmatively.

Next follow cases of late hereditary syphilis, characterized by gummata upon the forehead, in the liver, cases of arrested development, as those with infantile or even fœtal uterus, cases (aged between 7 and 20) of lupus-like rhinitis, with characteristic cicatrices in the throat, serpiginous ulcers with hyperostoses, characteristic solitary skin gummata, two cases of bone tuberculosis of the phalanges, spina ventosa, pedorthrocacia and lupus; cured, all of them, or relieved, by mercury and the iodide of potassium.

The author thinks physicians should be on the lookout for these cases of gummatous diathesis. The genuine ascites of childhood and epilepsy often rests upon this foundation. Also periostitides, osteo-myelitides, and arthropies of youthful age should always excite suspicion. So, when a bone-ulcer is found with a sclerotized wall or a capsule post-mortem, as is often read in autopsy reports, syphilis hereditaria tarda has been mostly overlooked.

The common recommendation of mercurial inunctions by the old surgeons in the successful treatment of these conditions should not be forgotten. In the cures of epilepsy by the bromide of potassium, it should be remembered that this remedy acts as an anti-syphilitic, like the iodide, even though this action is much more feeble.

IODOFORM PASTILLES.—Dr. Whistler (*Medical Times and Gazette*, November 30, 1878) recommends pastilles with a gelatin basis for the purpose of applying iodoform to the back of the pharynx in syphilitic ulceration, etc. The gelatin basis is composed as follows: refined gelatin, one part; glycerin, two and a half parts; flavored water, two and a half parts; liquid cochineal, q. s.; to be made into a paste. This gelatin basis should be kept ready prepared, and when it is needed should be melted; the ingredients, whether iodoform or something else, are incorporated with it. The mass is then allowed to cool, when it is cut into tablets of the requisite size. Both in taste and in form the iodoform psstille is agreeable. It melts easily in the mouth, and is less painful to the inflamed fauces than a hard lozenge would be.

## MISCELLANY.

EXTRAORDINARY CURE FOR OZÆNA.—It is not often that we meet with such a cure for ozæna as that urged by Renzoni (*C bl. f. Chir.*, No. 50, 1878; from *Il Morgagni*), who, in the case of a child who had been for some time under the usual antiseptic treatment for ozæna, inoculated the nasal mucous membrane with gonorrhœal secretion. Having thus excited a specific inflammation of the nasal passages, Renzoni treated this first with a thirty per cent. solution of nitrate of silver, and then with tannin and antiseptics, effecting a cure in fourteen days.

Here is an item worthy to take the place of the well-worn story of the doctor who threw

everything into fits. How would it sound?—"Sir," said the doctor, "I cannot cure your child of the ozæna, but I can inoculate his little nose with the clap, and I am death on the clap"!

If, since the morning stars sang together, there ever has been any system of medicine, religion, or science which illustrated the Yankee's definition of a flea,—"a crittur which, when you put your finger on it, warn't there,"—it is modern homœopathy. Dr. Doane (January number of *The Homœopathic Times*), in a panegyric on his favorite doctrine, says much as to what homœopathy is not. On dilutions he is "powerful." Witness the following:

"The idea that a given substance can be indefinitely diluted and its power indefinitely increased by agitation would have astonished the inhabitants of Earth in the darkest and most superstitious ages of ancient Egypt. The men who can believe such an incredible wonder should not deride those who exposed the sick in public places or treated disease by amulets, incantations, or charms; nor should they point the finger of scorn at the good old men who rubbed black cats over the stomachs of those who were tormented with the colic."

What Dr. Doane's homœopathy is must be gathered from the annexed paragraph:

"In my judgment, we have sufficient evidence to warrant us in the belief that many diseases are removed when drugs are administered which, if taken by a person in health, would produce certain morbid conditions resembling the existing disease. I say morbid conditions, in contradistinction to the host of symptoms gathered from the patient, which are as likely to be imaginary as real, and result as much from fancy as from medicine."

We have received the well-known work of John Hilton on "Rest and Pain," in the form of a reprint by William Wood & Co., New York. The work itself is too well known to need any comment, especially as the present is not a new edition, but a reprint from the London edition of 1876 or 1877. The remarkable feature is the price, one dollar, the volume being the first one of Wood's Library of Standard Medical Authors. The type is clear, the paper not very fine, but white, opaque, and all-sufficient for practical purposes.

Diphtheria in Fowls.—We read in the *Gazette des Hôpitaux* the following results of M. Nicati's experiments on diphtheria in fowls: 1. This disease can be transmitted from the chicken to any other being. 2. It can be inoculated into the eye of an individual who has already been attacked by the same disease. 3. The further development of diphtheria can, if not suppressed, at least be retarded by protecting the affected part from the air, the diphtheritic process being entirely dependent on air or oxygen.—*British Medical Journal.*

## NOTES AND QUERIES.

The following epitaph is stated by Dr. Goodell to have been taken from a tombstone:

### DR. GREENWOOD ON THE DEATH OF HIS WIFE.

Death! O Death! thou hast cut down
The fairest Greenwood in all this town!
Her virtues and abilities were such,
She was fitting to be wife of Lord or Judge;
Yet, such was her condescension and humility,
She chose to marry me, a poor doctor of divinity;
For which heroic act she stands confest,
Above all women, the phœnix of her sex,
Who, like that bird, one young one she did beget,
Not to leave her mate disconsolate.
Alack! alas! my grief it is so sore
That I can only write but two lines more:
For hers and every other good woman's sake,
Never to let a blister plaister be put on a
lying-in woman's back.

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Hall of Jefferson Medical College,
Philadelphia, January 20, 1879.

At a meeting of the Faculty, held this day, the death of Dr. John B. Biddle, Professor of Therapeutics and Materia Medica, and Dean of the Faculty, was announced; whereupon the following was ordered to be entered upon the minutes of the Faculty:

"The Faculty of Jefferson Medical College find themselves plunged into the deepest sorrow by the death of their fellow-member Dr. John B. Biddle, Professor of Therapeutics and Materia Medica, and Dean of their body, which occurred on the evening of the 19th inst. As a friend, they feel sadly the void thus created, and mourn over the departure of a greatly-loved companion. Endeared to them by his noble qualities of head and heart, as their colleague and executive officer, they realize the irreparable loss of a sound and sagacious thinker, an able and successful teacher, and a faithful, experienced, and judicious executive, whose untiring zeal and earnest labors in his own department, and for the school at large, have contributed so much to maintain the usefulness and advance the reputation of Jefferson Medical College.

"The Faculty feel that words are inadequate to express their sense of this bereavement, but desire to make record of the estimate in which they held the deceased, whose memory they will ever cherish with sincerest affection.

"They desire to convey to his sorrow-stricken family their warmest sympathy, trusting that in the knowledge they have of the esteem in which he was held in the community, and the love which was borne him by all his co-laborers and friends, and that he has left them, in the assurance of a Christian faith, for that larger life which is eternal, they find comfort and consolation.

"*Resolved*, That a copy of this testimonial of the Faculty be transmitted to the family of Dr. Biddle, and also to the honorable Board of Trustees, and that the Faculty will attend his funeral in a body.

"ELLERSLIE WALLACE, *Dean.*"

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At the annual meeting of the Board of Trustees of the German Eye and Ear Infirmary, 441 North Fifth Street, the surgeon in charge presented the medical report of the working of the dispensary for the year 1878.

During this time there have been gratuitously treated in the dispensary 1186 patients, of which number 811 were for eye diseases and 375 for ear diseases.

The number of important operations performed in the Institute was 97, of minor operations 146.

The officers of the Infirmary are Charles H. Meyer, L. Westergaard, Dr. J. Aitkin Meigs, Dr. J. Koerper, Prof. John M. Maisch, etc.; surgeon in charge, Dr. M. Landesberg.

## OFFICIAL LIST

*OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 2 TO FEBRUARY 8, 1879.*

Semig, B. G., First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Johnston, N.C. S. O. 18, Department of the South, January 28, 1879.